IN THE CLAIMS:

Cancel Claim 1.

2.(Currently amended) ~~The method of Claim 1,~~ A method for testing a data storage medium for defects, the method comprising the steps of:

determining whether a region on said storage medium contains user data, and if so, copying said user data from said region to a temporary storage location;

after the copying step, attempting to write a data pattern to said region of the storage medium, and then reading back contents of said region;

comparing said data pattern to said contents of said region which was read back to identify differences;

if a difference was identified, then replacing the first said region with a new region for storage of data,

if no difference was identified, then writing said user data back to the first said region. ~~further comprising determining whether the predetermined region contains user data, retrieving the user data and storing it to a temporary location before testing the predetermined region, and writing the saved user data back to the predetermined region if no error is detected.~~

3. Cancel Claims 3 - 6.

7.(Currently amended) The method of Claim 2, wherein the step of determining whether a region on said storage medium contains user data comprises the step of ~~determining whether the predetermined region contains data is performed by~~ examining a sector written indicator.

8.(Currently amended) The method of Claim 2, wherein the step of determining whether a region on said storage medium contains user data comprises the step of ~~determining whether the predetermined region contains data is performed by~~ examining a sector stripe written indicator.

a7

9.(Currently amended) The method of Claim 2, wherein the step of determining whether a region on said storage medium contains user data comprises the step of ~~determining whether the predetermined region contains data is performed by~~ examining a stripe written indicator.

Cancel claim 10.

11.(Currently amended) ~~The method of Claim 10,~~ A method of testing a data storage medium for errors in a region of storage device, the method comprising:

performing nondestructive testing of the region by reading data from a first region of a storage device and writing the data to a temporary location if the data is to be saved;

writing the data read from the first region back to the first region; and

if an error is detected either during the reading or during the writing, reallocating a second region, initializing the second region and replacing the first region with the second region; and

a8

wherein the method is performed on the first region if the first region is identified as a written region by a sector written indicator.

12.(Currently amended) The method of Claim 11~~0~~, wherein the method is performed on the first region if the first region is identified as a written region by a sector stripe written indicator.

13.(Currently amended) The method of Claim 11~~0~~, wherein the method is performed on the first region if the first region is identified as a written region by a stripe written indicator.

Cancel Claims 14 - 16.

17.(Currently amended) A method for testing a data storage medium for defects, the method comprising:

determining when a usage level of the storage medium is within a range of usage level for which background processing is permitted, and when the usage level is within the permitted range performing as a background process: (i) writing a ~~stress~~ data pattern to at least one predetermined region of the storage medium; and (ii) reading back the written data pattern;

comparing the data pattern written to the data pattern read back and identifying and reporting any error;

if an error was reported, then:

identifying a defective region;

reallocating a new region;

initializing the reallocated region for access; and

replacing the defective region with the reallocated region ~~before any further degradation occurs~~.

18.(Original) The method of Claim 17, further comprising reporting the defective region.

19.(Original) The method of Claim 17, wherein the determining whether the predetermined region contains data is performed by examining a sector written indicator.

20.(Original) The method of Claim 17, wherein the determining whether the predetermined region contains data is performed by examining a sector stripe written indicator.

21.(Original) The method of Claim 17, wherein the determining whether the predetermined region contains data is performed by examining a stripe written indicator.

22.(Original) A method of testing a data storage medium for errors in a region of a storage device, the region associated with an indicator that indicates whether a host computer has written data to the region, the method comprising:

determining that the host computer has written data to the region by examining the indicator;

as a background process, performing nondestructive testing of the region by reading data from a first region of a storage device and writing the data to a temporary location if the data is to be saved;

as a background process, writing the data read from the first region back to the first region;

if an error is detected either during the reading or during the writing, reallocating a second region, initializing the second region and replacing the first region with the second region.

23.(Original) The method of Claim 22, wherein the method is performed on the first region if the first region is a sector on a disk that is identified as a written region by a sector written indicator.

24.(Original) The method of Claim 22, wherein the method is performed on the first region if the first region is a plurality of sectors contained on multiple disks and is identified as a written region by a sector stripe written indicator.

25.(Original) The method of Claim 22, wherein the method is performed on the first region if the first region is a plurality of sectors on a single disk that is identified as a written region by a stripe written indicator.

26.(Original) The method of Claim 22, further comprising reporting the defective region.

Cancel Claims 27 - 28.

29.(Currently amended) A computer program product for use in conjunction with a computer system, the computer program product comprising a computer readable storage medium and a computer program ~~mechanism embedded~~ stored therein, the computer program ~~mechanism,~~ comprising:

a program module that directs the computer system or a controlled coupled thereto to test a storage medium for defects, the program module including instructions for:

determining when a usage level of the storage medium is sufficiently low to allow effective background processing;

as a background process, writing a ~~stress~~ data pattern to at least one predetermined region of the storage medium;

as a background process, reading back the written data pattern;

comparing the data pattern written to the data pattern read back and identifying and reporting any error;

if an error was reported, performing the steps of:

identifying a defective region;

reallocating a new region;

initializing the reallocated region for access; and

replacing the defective region with the reallocated region~~ before any further degradation occurs~~.

Q16

30.(Currently amended) A computer program product for use in conjunction with a computer system, the computer program product comprising a computer readable storage medium and a computer program ~~mechanism embedded~~ stored therein, the computer program ~~mechanism,~~ comprising: a program module that directs the computer system or a controller coupled thereto to test a data storage medium for errors in a region of a storage device, the region associated with an indicator that indicates whether a host computer has written data to the region, the program module including instructions for:

determining that the host computer has written data to the region by examining the indicator;

as a background process, performing nondestructive testing of the region by reading data from a first region of a storage device and writing the data to a temporary location if the data is to be saved;

as a background process, writing the data read from the first region back to the first region;

if an error is detected either during the step of reading or during the step of writing, reallocating a second region, initializing the second region and replacing the first region with the second region.

Cancel Claims 31 - 40.

41.(Currently amended) A method for testing a data storage medium for defects, the method comprising:

as a background procedure by a processor acting as a controller when processor utilization is below a predetermined threshold: (a) writing a ~~stress~~ data pattern to at least one predetermined region of the storage medium; (b) reading back the written data pattern; (c) comparing the data pattern written to the data pattern read back and identifying any error in the data; and (d) if an error in the data was identified, then: (i) identifying a defective region of the storage medium; (ii) reallocating a new region of the storage medium; (iii) initializing the reallocated new region for access; and (iv) replacing the defective region with the reallocated region ~~before any further degradation occurs~~; and

determining whether the predetermined region contains user data by examining at least one of a sector written indicator or a sector stripe written indicator, and retrieving the user data and storing it to a temporary location before testing the predetermined region, and writing the saved user data back to the predetermined region if no error is detected.

42.(~~Original~~ cancelled) A RAID controller, operatively connected to a host computer and a plurality of magnetic storage disks, wherein the storage disks are divided into sectors, such that the RAID controller enables the host computer to read and write data to the storage disks, the RAID controller comprises a media surface scanner that operates as a background process to perform nondestructive write testing to the sectors, and, upon finding defects in the sectors, reallocating sectors to replace the sectors having defects, and, when a sufficient number of defects has been detected, reports the defective sectors to a host computer.